NASA
Glenn
Success
Stories

Scattering Solutions Makes the Invisible Visible

TECHNOLOGY

NASA Glenn Research Center scientists are using technologies, skills, and experience developed at the laboratory as the foundation for new start-up companies. Scattering Solutions, LLC, a Northeast Ohio start-up company developing and commercializing breakthrough light scattering technology, was founded in partnership with researchers at NASA Glenn.

COMMERCIAL APPLICATION

Scattering Solutions was recently formed by NASA Glenn researchers and others as a NASA spin-off company. Growing market requirements provide opportunity for the new technology to serve the community. These researchers are combining the technical knowledge they gained at NASA with insight into market opportunities to launch Scattering Solutions.

Scattering Solutions' Smart Probe® addresses an important market need.

The company's initial product, the Smart Probe®, determines particle-size at a much lower cost than competing technologies. The probe measures a broad range of suspended particle sizes, including nano-sized particles in both dilute and concentrated suspensions. These patented technologies include cross-correlation for multiple scattering mitigation, enabling characterization of particles in both transparent and turbid media. Optical homodyning adds other advantages, including the ability to size particles in nano-liter volumes.

The Great Lakes Industrial Technology Center (GLITeC) has provided Scattering Solutions with assistance through the Emergent™ suite of services. GLITeC helped shape the company's marketing message, led a search for seed funding, and gave creative advice for business planning.

SOCIO-ECONOMIC BENEFIT

Scattering Solutions is a new company incorporated in Northeast Ohio. It is currently building prototypes and developing manufacturing capabilities.

The company's technology is ideal for charactering proteins in the emerging $30 billion protein therapeutics market. Scattering Solutions technology can replace current methods of measuring proteins and detecting aggregation and degradation by offering superior performance with significant cost reductions.

For the $29 billion nano-materials industry, Scattering Solutions offers simple and accurate measurement characterization of liquid dispersions of these expensive materials. This technology can also enhance water quality monitoring by detection of suspended contaminants and organisms.

NASA APPLICATIONS

NASA Glenn originally developed this light scattering technology through its Advanced Technology Development (ATD) programs in light scattering. These programs funded many advances that were used for light scattering experiments in space, where the effects of gravity are removed, making it possible to see how order can arise out of chaos (CDOT, PHASE, PCS) and to lay the foundations for colloidal self-assembly (BCAT, LMM).

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